

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000600**Date Inspected:** 09-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 930**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Ye Yongjun & Xu Bing
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: Yes No N/A
Approved WPS: Yes No N/A
Delayed / Cancelled: Yes No N/A
Component: Mock Up

Bridge No: 34-0006**Summary of Items Observed:**

Elevation 77:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Mock Up. The QA Inspector randomly observed ZPMC qualified welders Yong Lei and Zhai Qingshan utilizing the Shielded Metal Arc Welding (SMAW) process in the 2G/2F positions to weld the connection plate piece mark p596, to Skin Plate D Sub-Assembly (SA) MUSA-MA5. Mr. Lei and Mr. Zhai were utilizing ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-4312-TC-P5-1 with a 5.0 millimeter diameter electrode. Mr. Lei was welding on Weld Joint (WJ) 13 while Mr. Zhai was welding on WJ 14. The QA Inspector observed ZPMC CWI Zhu Zhonghai monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 225 amps, welding voltage 23 volts with a travel speed of 125 millimeters per minute for Mr. Lei and 230 amps, 23 volts with a travel speed of 130 millimeters per minute for Mr. Zhai. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

Elevation 114:

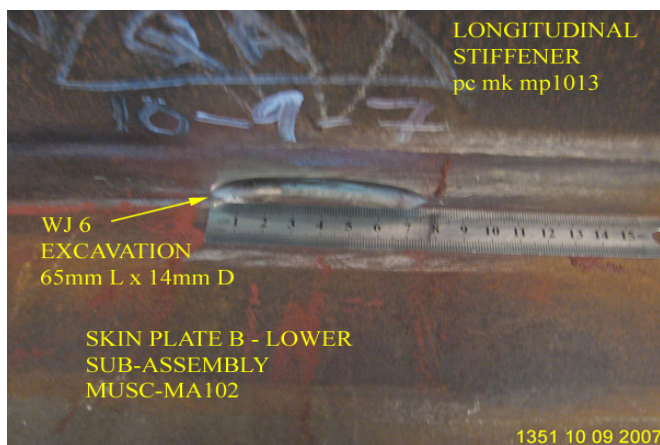
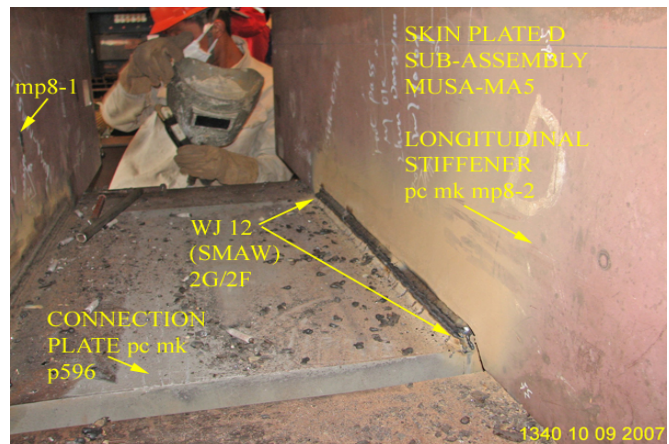
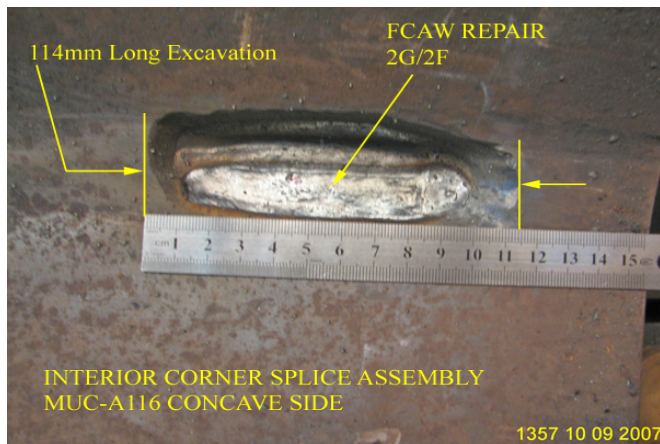
The QA Inspector randomly observed welding being performed for the fabrication of the Mock Up at elevation 114. The QA Inspector randomly observed ZPMC qualified welder Bai Wenming utilizing the Flux Cored Arc Welding (FCAW) process to perform a FCAW weld repair to an excavation 112 millimeters long in WJ 6 Interior Corner Splice Assembly MUC-A116. Welding was already in progress and the QA Inspector was not able to

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measure the depth of the excavation. Mr. Bai was utilizing ZPMC approved WPS WPS-345-FCAW 2G(2F)-Repair. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 293 amps, welding voltage 29.6 volts with a travel speed of 280 millimeters. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC Non Destructive Testing (NDT) Technician Zhou Dongyun utilizing the Magnetic Particle Testing Method (MT) to examine 100% of the full length of an excavation in Complete Joint Penetration (CJP) Weld Joint (WJ) number 6 A, attaching longitudinal stiffener piece mark mp1006 to Skin Plate B Lower, Sub-Assembly MUSC-MA108 prior to performing weld repairs. The QA Inspector also performed 100% MT verification examination of the same excavation. There appeared to be no indications. The following photograph provides additional detail.



Summary of Conversations:

The QA Inspector asked ZPMC QA Representative Li Sui Yang and ZPMC CWI Xu Bing, why welding was being performed on Interior Splice Assembly MUC-A75, after ABF had informed Caltrans that all new welding was to be suspended until further notice. The only response that the QA Inspector received, was that the tack welds had been previously placed. The QA Inspector could not locate any tags or written notation on the part of fit up inspection or tack weld inspection, and asked Mr. Li where any such notation would be, and Mr. Li informed the QA Inspector that he could not locate any on the part.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie
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Quality Assurance Inspector

Reviewed By:	Cochran,Jim
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QA Reviewer
